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(54) Title: POLYNUCLEOTIDES CAPABLE OF TARGET-DEPENDENT CIRCULARIZATION AND TOPOLOGICAL LINKAGE

(57) Abstract: The invention provides allosterically regulatable polynucleotides capable of target-dependent circularization and topological linkage to a target nucleic acid molecule. Polynucleotides of the invention include a target binding sequence and a regulatory element which prevents circularization in the absence of the target binding. Polynucleotides may include a catalytic domain, allowing circularization to proceed via catalysis when the target binding sequence of the polynucleotide is bound to the target. Topologically linked polynucleotides may be used for detection of target molecules or to inhibit transcription or translation of the target.